

black, irregularly blackish cinereous towards the hind border; veins and halteres black; discal transverse vein straight, parted by nearly its length from the border, and by very much more than its length from the præbrachial transverse vein. Length of the body 2 lines; of the wings 3 lines.

Gen. DISCOMYZA, *Meigen*.

74. DISCOMYZA TENEBROSA. *Mas.* Nigricanti-picea, capite piceo gutta testacea, antennis nigris basi testaceis, pectore pedibusque albis, femoribus tibiisque nigro fasciatis, alis nigricantibus apud costam nigris costa valde convexa.

*Male.* Blackish piceous, shining. Head piceous, with a testaceous dot in front; underside and pectus white. Antennæ black, shorter than the face, testaceous at the base; third joint conical; arista plumose. Abdomen not longer than the thorax. Legs white; femora and tibiæ with black bands. Wings blackish, black along the costa, which is very convex; veins black; discal transverse vein straight, parted by more than its length from the border, and by nearly twice its length from the præbrachial transverse vein. Length of the body  $1\frac{1}{2}$  line; of the wings  $2\frac{1}{2}$  lines.

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Descriptions of some New Species of Dipterous Insects from the Island of Salwatty, near New Guinea. By FRANCIS WALKER.

[Read March 3, 1864.]

Fam. MYCETOPHILIDÆ, *Haliday*.

Gen. MYCETOPHILA, *Meig.*

1. MYCETOPHILA OBSCURATA. Nigra, nitens, ore coxisque albidis, antennis basi flavescens, thorace subcompresso, alis cinereis apud costam nigricantibus.

Black, shining; mouth whitish; antennæ filiform, yellowish towards the base; thorax slightly compressed; legs rather long; coxæ whitish; hind tibiæ with short slender spines; hind tarsi very minutely setulose. Wings dark cinereous, blackish along the costa; veins black; radial vein ending at two-thirds of the length of the wing; cubital ending at a little in front of the tip; subapical forked before the middle; subanal and anal veins distinct, the former not forked. Length of the body 2? lines; of the wings 4 lines.

The specimen here described is mutilated; it may form a new genus.

Fam. TIPULIDÆ, *Haliday*.Gen. LIMNOBIA, *Meig.*

2. LIMNOBIA FILIFORMIS. *Mas.* Lutescens, antennis nigris gracillimis corporis dimidio paulo longioribus, abdomine fasciis duabus dimidioque apicali nigris, pedibus nigris longis gracillimis, alis fuscis angustis.

*Male.* Pale luteous, shining, slender. Head and antennæ black; the latter curved upward, filiform, very slender, more than half the length of the body. Abdomen with black bands on the hind borders of the first and second segments; apical half black. Legs dark ochraceous, long, very slender; femora and tibiæ towards the tips and tarsi blackish. Wings blackish cinereous; veins black; a discal areolet; radial vein forked; first externo-medial vein not forked; one veinlet between the third externo-medial vein and the subanal vein, joining the discal areolet at a little before the middle of the latter. Length of the body  $5\frac{1}{2}$  lines; of the wings 12 lines.

Gen. PACHYRHINA, *Macq.*

3. PACHYRHINA COLORATA. *Fæm.* Lutea, palpis apice nigricantibus, antennis nigris basi luteis, thorace vittis tribus maculisque posticis quatuor nigris, abdomine fasciis tribus et triente apicali atris, femoribus anticis basi luteis, femoribus posticis lutescentibus apice nigris, alis subcinereis apice nigricantibus.

*Female.* Bright luteous. Palpi blackish towards the tips. Antennæ black, setose, luteous at the base. Thorax with three deep black stripes and with four hindward black spots; middle stripe broader in front, much longer than the others. Abdomen with three narrow deep black bands which are convex in front; apical third part deep black, chalybeous at the tip; oviduct luteous. Legs black, stout; fore femora luteous towards the base; posterior femora dingy luteous, black towards the tips. Wings slightly cinereous; tips with a blackish tinge; veins black, pale yellow at the base; stigma blackish brown. Length of the body 9 lines; of the wings 16 lines.

Gen. GYNOPLISTIA, *Westw.*

4. GYNOPLISTIA INSOLITA. *Fæm.* Nigra, capite antico ferrugineo, antennis late pectinatis, abdomine fasciis quatuor apiceque luteis, femoribus luteis apice nigris, tibiis albo fasciatis, alis cinereis vitta costali nigra maculis tribus posticis nigricantibus.

*Female.* Black. Head ferruginous in front. Antennæ broadly pectinated, ferruginous at the base. Abdomen with four luteous bands on the fore borders of the segments; second band narrower than the first, broader than the third; fourth very narrow; tip and oviduct luteous. Legs stout; femora luteous, with black tips; tibiæ with a broad white band near the base. Wings cinereous, with three diffuse

blackish spots along the hind border; a black costal stripe, broadest towards the base and towards the tip, contiguous in the middle to a black dot; veins black. Length of the body 8 lines; of the wings 14 lines.

Fam. ASILIDÆ, *Leach.*

Subfam. ASILITES, *Walk.*

Gen. OMMATIUS, *Ill.*

5. OMMATIUS CANUS. *Mas.* Nigro-piceus, capite pectoreque albidis, facie subaurata, abdomine cinereo segmentis albedo marginatis apice nigro nitente, femoribus postice halteribusque albidis, alis cinereis apice nigricantibus.

*Male.* Piceous black. Head and pectus with shining whitish tomentum. Head broader than the thorax; face slightly gilded; mystax composed of a few white bristles. Eyes flat in front. Proboscis and antennæ black. Thorax with cinereous-bordered sutures. Abdomen cinereous; hind borders of the segments whitish; tip black, shining. Legs black; femora whitish on the hind side except towards the tips; hind femora whitish on both sides. Wings cinereous, blackish at the tips; veins black; halteres whitish. Length of the body 5 lines; of the wings 8 lines.

Fam. MUSCIDÆ, *Latr.*

Subfam. TACHINIDES, *Walk.*

Gen. EURYGASTER, *Macq.*

6. EURYGASTER FINGENS. *Fam.* Anthracina, capite subaurato frontalibus piceis facialibus setosis, antennis piceis articulo 3<sup>o</sup> longissimo, thorace antico cinereo, abdomine maculis duabus apicalibus elongatis albidis, alis cinereis apud costam basalem subnigricantibus.

*Female.* Coal-black, broad, bristly. Head pale gilded cinereous; frontalia piceous, linear; facialia beset with bristles; epistoma not prominent. Eyes bare. Antennæ piceous, extending to the epistoma; third joint linear, rounded at the tip, eight times the length of the second; arista longer than the third joint. Thorax with cinereous tomentum in front where two slender black stripes are apparent. Abdomen a little broader but not longer than the thorax, with an elongated whitish spot on each side at the tip. Wings cinereous, slightly blackish in front towards the base; veins black; præbrachial vein forming a right angle at its flexure, curved inward from thence to its tip, which is nearly contiguous to the cubital vein at some distance in front of the tip of the wing; discal transverse vein slightly bent inward near its base, parted by much less than its length from the border, and by nearly its length from the flexure of the præbrachial vein; alulæ dingy whitish. Length of the body 3½ lines; of the wings 7 lines.

Subfam. ORTALIDES, *Haliday*.Gen. POTICARA, *Walk.*

7. POTICARA BIARCUATA. *Fem.* Nigra, capite aurato vertice rubro frontalibus atris, antennis luteis, pectore abdomineque nigro-viridibus, femoribus flavis apice nigris, alis nigris striga basali maculis tribus costalibus striga postica exteriore maculisque duabus subapicalibus albidis.

*Female.* Black. Head gilded yellow, nearly as broad as the thorax; vertex deep red; front deep black; face broad, with an ochraceous mark towards the front. Antennæ luteous, not more than half the length of the face; third joint slightly tapering, full twice the length of the second; arista very delicately setulose. Thorax dull. Pectus greenish black, shining. Abdomen blackish green, fusiform, much narrower but hardly longer than the thorax. Femora, excepting the tips, and fore coxæ yellow. Wings black, in structure like those of *P. triarcuata*; a small whitish streak near the base of the costa; three triangular whitish costal spots, of which the first is very small; a whitish oblique streak beyond the middle of the hind border, and two whitish triangular spots near the tip of the latter; veins and halteres black. Length of the body 5 lines; of the wings 12 lines.

The structure of the head in this genus indicates its affinity to *Achias*; it is also allied to *Dacus* and to *Lamprogaster*.

Gen. ACHIAS, *Fabr.*

8. ACHIAS DACOIDES. *Mas.* Obscure rufa, capite flavescente dilatato fasciis duabus vittisque sex nigris, antennis piceis basi fulvis, thorace vittis tribus nigris scutello fulvo metathorace fascia albida, abdomine piceo petiolato vitta pallidiore, pedibus nigris tarsis posticis femoribusque flavis, alis cinereis vitta costali fusca, halteribus flavis apice nigris.

*Male.* Dark red. Head dingy yellowish, much dilated, broader by half than the thorax; two black bands on the vertex; face with two black stripes; two oblique black stripes on each side, each of the first pair forked towards the facial stripe, and thus including a small triangular yellowish dot. Antennæ piceous, tawny at the base, not extending to the epistoma; third joint tapering, full four times the length of the second; arista setulose. Thorax with three black stripes; scutellum tawny; metathorax with a whitish band. Pectus partly covered with cinereous tomentum. Abdomen petiolated, elliptical, piceous, with a paler stripe and with cinereous tomentum, much narrower and rather longer than the thorax. Legs black; femora yellow, black at the base; hind tarsi yellow, black towards the tips. Wings cinereous, with a brown costal stripe; veins black, pale yellow towards the base; discal transverse vein hardly bent inward, parted by one-fourth of its length from the border, and by more than its length

from the præbrachial transverse vein, which is oblique; halteres pale yellow, with black knobs. Length of the body 6 lines; of the wings 13 lines.

Gen. *PLATYSTOMA*, *Latr.*

9. *PLATYSTOMA IMPINGENS*. *Fœm.* Nigro-cinerea, capite albo vertice fronteque luteis vittis duabus lateralibus nigris, thorace vittis tribus canis duabusque lateralibus cinereis guttis duabus lateralibus nigris, abdomine lateribus basi tibiisque posterioribus rufescentibus, alis albidis guttis plurimis fasciisque quatuor exterioribus fuscis, halteribus testaceis.

*Female.* Cinereous black. Head white, narrower than the thorax; vertex and front dull luteous; face elongated, tinged with pale yellow; a broad black shining stripe on each side. Antennæ piceous, not half the length of the face; third joint piceous, about four times the length of the second, which is red; arista plumose. Thorax with three hoary stripes and with two intermediate cinereous stripes; a black dot on each of the two outer stripes. Abdomen oval, much shorter and narrower than the thorax, with some short hoary hairs, which are mostly on the hind borders of the segments; sides dull reddish towards the base. Legs black; posterior tibiæ dark reddish, except towards the tips. Wings whitish, with numerous brown dots towards the base, and with four exterior brown bands; first band irregular, partly composed of dots; second slightly guttular in front, connected on the hind border with the third, which is connected in the middle with the irregular subapical fourth band; veins black; discal transverse vein straight, parted by one-fourth of its length from the border, and by very much more than its length from the oblique præbrachial transverse vein; alulæ white; halteres testaceous. Length of the body 6 lines; of the wings 12 lines.

Gen. *DACUS*, *Fabr.*

10. *DACUS TURGIDUS*. *Mas.* Niger, capite flavo punctis duobus macula fasciaque nigris, antennis fulvis, thorace vittis quatuor halteribusque flavis, abdomine subpetiolato fascia flava, pedibus piceis femoribus sordide flavescentibus basi albidis, alis limpidis vittis duabus nigricantibus costa extus valde dilatata.

*Male.* Black. Head yellow, with two black points on each side between the eyes, and a black middle spot, which is forked hindward; face with a black band in front. Antennæ tawny, little more than half the length of the face; third joint elongate conical, about twice the length of the second; arista plumose. Thorax with four yellow stripes; outer pair extending to the base of each wing, and thence bent across each side of the pectus; inner pair extending along each side of the metathorax. Abdomen fusiform, subpetiolated, much longer and narrower than the thorax, with a yellow band on the fore border of the second segment. Legs piceous; fore femora dingy

yellowish, slightly shaded with piceous; posterior femora whitish towards the base. Wings limpid, with two blackish stripes, one costal; the other mostly contiguous to the hind border, terminating by the discal transverse vein; costa much dilated exteriorly; veins black; discal transverse vein oblique, nearly straight, parted by one-sixth of its length from the border, and by a little less than its length from the præbrachial transverse vein, which is unusually long; halteres pale yellow. Length of the body 5 lines; of the wings 11 lines.

This species has some affinity to the genus *Poticara*.

11. *DACUS DETRUDENS*. *Mas.* Purpureo-cyaneus, frontalibus nigris, facie fulva nigro fasciata, palpis nigris apice fulvis, antennis piceis basi fulvis, thorace vitta cinerea, abdomine subcompresso, pedibus piceis tibiis posticis basi subtus albidis, alis cinereis, halteribus albis.

*Male.* Purplish blue; nearly allied to *D. varialis*. Head and pectus with cinereous tomentum. Head a little broader than the thorax; frontalia black, widening in front; face tawny, with a black band near the epistoma, which is prominent. Proboscis and palpi black, the latter tawny towards the tips. Antennæ piceous, a little longer than the face, tawny towards the base; third joint linear, full four times the length of the second; arista bare, slender. Thorax with a cinereous stripe. Abdomen linear, sessile, slightly compressed, much narrower and longer than the thorax. Legs piceous; hind tarsi whitish beneath towards the base. Wings cinereous, slightly darker towards the costa; veins black; discal transverse vein nearly straight, blackish-clouded, parted by hardly half its length from the border, and by a little more than its length from the præbrachial transverse vein; halteres white. Length of the body  $4\frac{1}{2}$  lines; of the wings 8 lines.

Gen. *SOITA*, n. g.

*Mas.* *Corpus* longum, gracile. *Caput* setis duabus incrassatis arcuatis. *Oculi* nudi. *Antennæ* facie longiores; articulus 3<sup>us</sup> linearis, 2<sup>o</sup> quadruplo longior. *Thorax* elongatus. *Abdomen* lineare, subcompressum, thorace valde longius. *Pedes* antici breves, tenues; postici longi, femoribus subincrassatis, tibiis spinosis.

*Male.* Body long, slender, shining, minutely pubescent. Head hardly broader than the thorax, with a few bristles, two of which on the fore part of the vertex are incrassated and curved; face short, vertical; epistoma hardly prominent. Eyes bare. Proboscis and palpi short. Antennæ longer than the face; third joint linear, four times the length of the second; arista with very short hairs. Thorax elongated, with a few bristles on each side. Abdomen linear, slightly compressed, much narrower and very much longer than the thorax. Fore legs short, slender, with slightly setose femora; middle legs moderately long; hind legs much longer, with slightly incrassated femora and spinose tibiæ. Wings moderately broad; subcostal vein ending at the middle of the costa; radial vein ending at some distance from the

tip of the wing; discal transverse vein straight, parted by one-fourth of its length from the border, and by very much more than its length from the præbrachial transverse vein.

12. *SOITA PSILOIDES*. *Mas.* Pallide lutea, tibiis anticis femoribus halteribusque pallide testaceis, alis cinereis apud venas subluridis vena transversa discali fusco nebulosa.

*Male.* Pale luteous, with black bristles. Femora and fore tibiæ pale testaceous. Wings cinereous, slightly lurid along the veins; veins black, pale luteous towards the base; discal transverse vein clouded with brown hindward; halteres pale testaceous. Length of the body 5 lines; of the wings 8 lines.

Subfam. HYDROMYZIDES, *Fallén.*

Gen. NOTIPHILA, *Fallén.*

13. *NOTIPHILA ORTALIOIDES*. *Mas.* Nigra, thorace piceo tomentoso, tarsis piceis, alis nigris lituris quatuor interioribus parvis quatuorque exterioribus majoribus transversis albis.

*Male.* Black. Head and thorax with some black bristles. Eyes bare. Antennæ as long as the face; third joint linear, much longer than the second; arista plumose. Thorax with piceous tomentum. Tarsi piceous. Wings black, with eight white marks; four marks minute, near the base; four exterior, larger, transverse; discal transverse vein straight, parted by half its length from the border, and by very much more than its length from the præbrachial transverse vein. Length of the body  $1\frac{3}{4}$  line; of the wings 3 lines.

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Facts relative to the Movements of Insects on Dry, Polished, Vertical Surfaces. By JOHN BLACKWALL, F.L.S.

[Read Nov. 17, 1864.]

(Abstract.)

As objections continue to be urged against the opinion that flies and other insects of various species are enabled to move on the vertical surfaces of highly polished bodies by the emission of an adhesive fluid from the numerous hair-like papillæ distributed over the inferior surface of their pulvilli, the statement of a few plain facts for the consideration of dissentients, and especially of those who still advocate the hypothesis that flies, in such instances as those referred to above, are supported in their movements mainly by the pressure of the atmosphere, may, perhaps, be deemed deserving of attention.